

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PILE & ANCHOR SCHEDULE

Pile Number	Pile Type	Top/Pile Elev.	Pile Tip Elev.	Est. Pile Length (Ft.)	Stud Spc. (In.)	*No. of Studs Per Beam	Anchor Number	Design Load (k)	Inclination (Deg.)	Est. Unbonded Length (Ft.)	Est. Bond Length (Ft.)	Est. Total Length (Ft.)	**Dist. To R.O.W. (Ft.)
1	HP12x84	740.64	720.64	20.00	12	2	-	-	-	-	-	-	-
2	HP12x84	743.73	721.73	22.00	12	5	-	-	-	-	-	-	-
3	(2)-HP10x42	746.81	732.81	14.00	12	8	3	55.94	15	10.0	14.9	24.9	43.0
4	(2)-HP10x42	749.89	725.89	24.00	12	11	4	122.40	15	10.9	31.7	42.6	44.9
5	(2)-HP10x42	752.97	724.97	28.00	12	14	5	122.40	15	10.9	32.7	43.6	46.8
6	(2)-HP10x42	756.05	722.05	34.00	12	17	6-U	91.93	15	12.9	24.5	37.4	48.7
							6-L	66.28	15	10.0	17.7	27.7	48.7
7	(2)-HP10x42	759.13	713.13	46.00	12	20	7-U	112.79	15	15.0	30.1	45.1	50.6
							7-L	103.39	15	10.0	27.6	37.6	50.6
8	(2)-HP10x42	759.44	715.44	44.00	12	20	8-U	98.24	15	15.0	26.2	41.2	52.5
							8-L	90.05	15	10.0	24.0	34.0	52.5
9	(2)-HP10x42	759.38	715.38	44.00	12	20	9-U	99.25	15	14.9	26.5	41.4	59.3
							9-L	90.15	15	10.0	24.0	34.0	59.3
10	(2)-HP10x42	759.38	713.38	46.00	12	20	10-U	111.89	15	14.9	29.9	44.8	58.4
							10-L	101.62	15	10.0	27.1	37.1	58.4
11	(2)-HP10x42	759.38	713.38	46.00	12	20	11-U	111.89	15	14.9	29.9	44.8	58.4
							11-L	101.62	15	10.0	27.1	37.1	58.4
12	(2)-HP10x42	759.38	713.38	46.00	12	20	12-U	111.89	15	14.9	29.9	44.8	58.4
							12-L	101.62	15	10.0	27.1	37.1	58.4
13	(2)-HP10x42	759.38	713.38	46.00	12	20	13-U	111.89	15	14.9	29.9	44.8	58.4
							13-L	101.62	15	10.0	27.1	37.1	58.4
14	(2)-HP10x42	759.38	713.38	46.00	12	20	14-U	111.89	15	14.9	29.9	44.8	58.6
							14-L	101.62	15	10.0	27.1	37.1	58.6
15	(2)-HP10x42	759.38	713.38	46.00	12	20	15-U	111.89	15	14.9	29.9	44.8	58.6
							15-L	101.62	15	10.0	27.1	37.1	58.6
16	(2)-HP10x42	759.38	713.38	46.00	12	20	16-U	111.89	15	14.9	29.9	44.8	58.4
							16-L	101.62	15	10.0	27.1	37.1	58.4
17	(2)-HP10x42	759.38	713.38	46.00	12	20	17-U	111.89	15	14.9	29.9	44.8	58.4
							17-L	101.62	15	10.0	27.1	37.1	58.4
18	(2)-HP10x42	759.38	717.38	42.00	12	21	18-U	95.64	15	14.9	25.5	40.4	53.4
							18-L	86.87	15	10.0	23.2	33.2	53.4
19	(2)-HP10x42	759.38	712.38	47.00	12	19	19-U	129.17	30	12.9	34.5	47.4	78.1
							19-L	102.61	30	10.0	27.4	37.4	78.1
20	(2)-HP10x42	759.38	721.38	38.00	12	15	20-U	93.50	30	11.1	25.0	36.1	70.0
							20-L	57.93	30	10.0	15.4	25.4	70.0
21	(2)-HP10x42	759.38	731.38	28.00	12	12	21	106.19	30	10.0	28.3	38.3	62.0
22	(2)-HP10x42	759.38	741.38	18.00	12	9	22	70.06	30	10.0	18.7	28.7	54.0
23	HP12x84	759.38	731.38	28.00	12	6	-	-	-	-	-	-	-
24	HP12x84	759.38	735.38	24.00	12	3	-	-	-	-	-	-	-

\* Number of studs per beam shown. Number of studs per pile for built-up section will be twice number shown.

\*\* Horizontal distance from front face of wall to R.O.W. Contractor to verify.

DESIGN ASSUMPTIONS (USED TO CHECK FEASIBILITY ONLY):

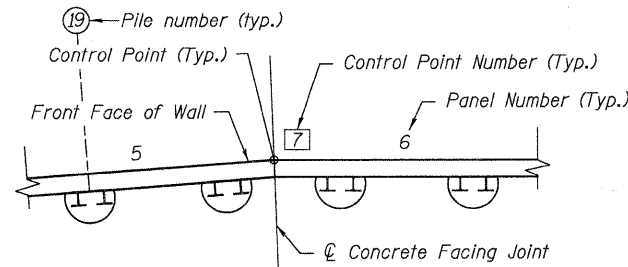
1. Estimated ultimate transfer load = 7.5k/ft.
2. Maximum allowable design load = Estimated ultimate transfer load divided by 2.
3. Bar tendons were assumed for checking feasibility.
4. Unbonded portion must extend 5' beyond active failure wedge, not less than 10' minimum length for bar tendons. If strand type anchors are used, the minimum unbonded length shall be 15'.

Note: The above assumptions have been used only for the purpose of establishing minimum dimensions for drill hole diameter, unbonded length and bond length. The contractor shall be responsible for determining the selection and installation of the anchors that will provide the required design load, fitting within the R.O.W. limits of the site.

DESIGNED	JCE/KJH
CHECKED	PMH
DRAWN	JCE/PMH
CHECKED	KJH

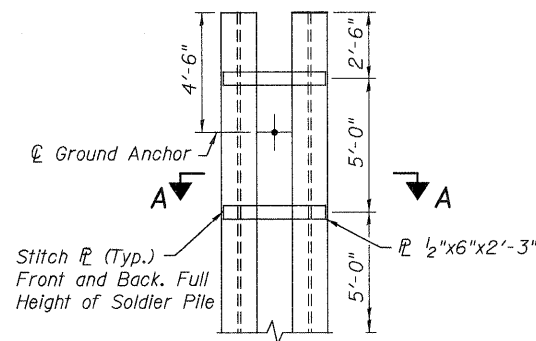
CONTROL POINTS

Panel	Control Point No.	McLean Blvd. Station	Offset Lt. (Ft.)
1	1	811+62.99	86.66
2	2	811+92.12	79.48
3	3	812+21.24	72.29
4	4	812+48.43	65.58
5	5	812+78.43	65.58
6	6	813+08.43	65.58
7	7	813+23.93	65.58
8	8	813+40.87	82.58
9	9	813+57.81	99.58



TYPICAL CONTROL POINT LOCATION

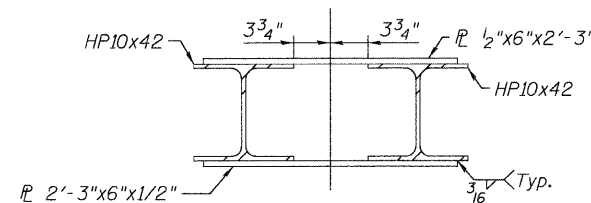
Plan View



FRONT VIEW OF SOLDIER PILE

BUILT-UP SECTION

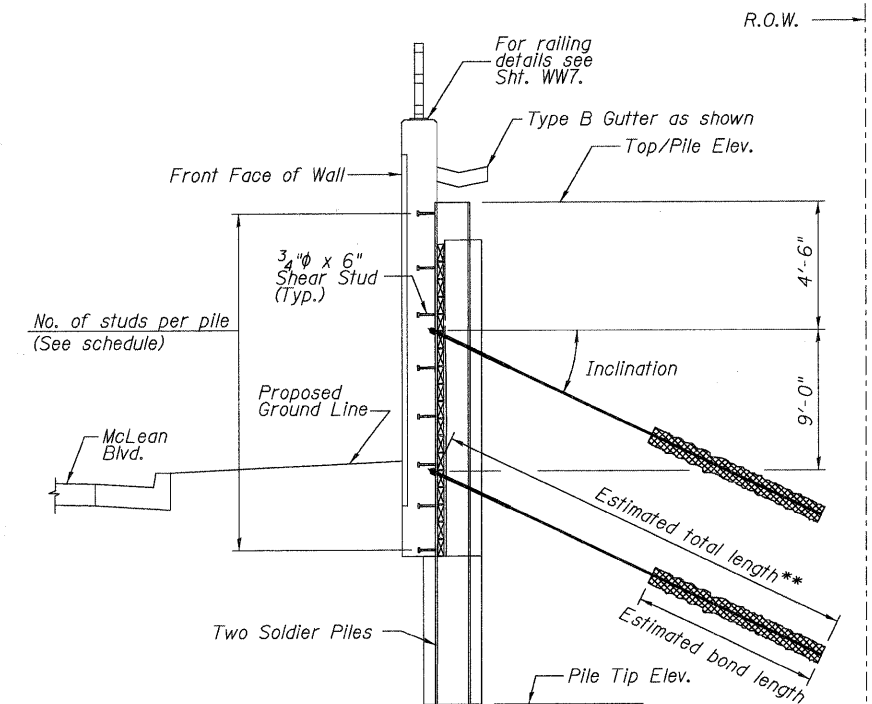
Typical, Piles 2 to 21



SECTION A-A

SUGGESTED SEQUENCE OF CONSTRUCTION

1. Drill holes for soldier piles. Do not excavate near these holes at this stage.
2. Set soldier piles.
3. Place soldier pile encasement concrete and controlled low-strength material (CLSM), as shown on plans.
4. Begin earth excavation. Remove only earth and CLSM as necessary to install timber lagging.
5. Install permanent ground anchors. Earth excavation shall be no more than two feet below anchor location.
6. Test permanent ground anchors and fill cover with anti-corrosion grout.
7. Complete remaining earth excavation and installation of wall components as in Step #5.
8. Install geocomposite wall drain.
9. Install stud shear connectors.
10. Backfill timber lagging.
11. Construct concrete fascia.



WALL SECTION W/GROUND ANCHORS

\*\* Note: Actual required anchor length is to be determined by Contractor. Length shall not exceed the estimated total length shown in schedule, due to R.O.W. constraints.

PILE AND ANCHOR SCHEDULE  
STRUCTURE NO. 045-2038

McDonough Associates Inc.  
Engineers / Architects  
130 East Randolph Street  
Chicago, Illinois 60601  
(312) 946-8600

SHEET NO. WW4	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	361	06-00214-02-BR	KANE	219	152
WW9 SHEETS	CONTRACT NO. 63073				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					